

DATA SHEET

Product Name: ANA-12

Catalog #: N-3031

Alt: CAS# 219766-25-3; N-[2-[[[Hexahydro-2-oxo-1H-azepin-3-yl)amino]carbonyl]phenyl]benzo[b]thiophene-2-carboxamide

Source: Synthetic

Molecular Mass: 407.5 C₂₂H₂₁N₃O₃S

Analysis: 98% (TLC); NMR (Conforms)

Supplied As: White powder

Resuspension: May be dissolved in DMSO (20 mg/ml)

Storage: Store desiccated as supplied at -20°C for up to 2 years. Store solutions at -20°C for up to 2 months.

Description: TrkB receptor antagonist. Binds to two distinct receptor sites preventing activation by BDNF noncompetitively, IC₅₀ = 45.6 nM and 41.1 μM for the high and low affinity sites respectively. Systemic administration to adult mice decreased TrkB activity in the brain without affecting neuronal survival or altering TrkA and TrkC functions. Displays antidepressant and anxiolytic properties in mouse models after systemic administration¹. Has been used to elucidate the role of BDNF in food intake², in improvement of cognitive decline during calorie restriction³ and in the discovery of new neurotrophic agents⁴.

References:

1. Cazorla, M., et al., (2011) J. Clin. Invest., 121: 1846
2. Spaeth, A.M., et al., (2012) Am. J. Physiol. Endocrinol. Metab., 302: E1252
3. Kishi, T., et al., (2015) Int. Heart J., 56: 110
4. Chakravarty, S., et al., (2015) Sci. Rep., 5: 14134

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